

**Notice of Allowability**

Application No.

09/934,257

Examiner

Andre Boyce

Applicant(s)

SCHNEIDER, GARY M.

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**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--**

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to Applicant's After Final amendment filed January 10, 2005.
2. ☒ The allowed claim(s) is/are 1-3,5,6,13,15-18,54-59 and 61-64.
3. ☒ The drawings filed on 27 March 2002 are accepted by the Examiner.
4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) ☐ All    b) ☐ Some\*    c) ☐ None    of the:
    1. ☐ Certified copies of the priority documents have been received.
    2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
    3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).


\* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.  
**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
  6. ☐ CORRECTED DRAWINGS ( as "replacement sheets") must be submitted.
    - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review ( PTO-948) attached
      - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.
    - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

**Attachment(s)**

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☒ Information Disclosure Statements (PTO-1449 or PTO/SB/08),  
Paper No./Mail Date 7/26/04
4. ☐ Examiner's Comment Regarding Requirement for Deposit  
of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☐ Interview Summary (PTO-413),  
Paper No./Mail Date \_\_\_\_\_.
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other \_\_\_\_\_.

  
**TARIQ R. HAFIZ**  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 3600

## **DETAILED ACTION**

### ***Response to Amendment***

1. The following is a response to Applicant's After Final amendment filed January 10, 2005. Claims 1, 55, 59, and 62 have been amended. Claims 4, 7-12, 14, 19-53, and 60 have been canceled. Claims 1-3, 5, 6, 13, 15-18, 54-59, and 61-64 are pending.

### ***Examiner's Amendment***

2. An Examiner's Amendment to the record appears below. Should changes and/or additions be unacceptable to Applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.
3. Authorization for this Examiner's Amendment was given in a telephone interview with Darin Bartholomew on February 2, 2005. The application has been amended as follows:

#### **In the claims:**

1. (Currently amended) In line 9, insert --, on a computer,-- after "analyzing said input information".
55. (Currently amended) In line 9, insert --, on a computer,-- after "analyzing said input information".

***Reasons for Allowance***

4. Claims 1-3, 5, 6, 13, 15-18, 54-59, and 61-64 are allowed.
5. The following is an Examiner's statement of reasons for allowance:

With respect to independent claims 1 and 59, none of the prior art of record, taken individually or in any combination, teach inter alia, maximizing the objective function to generate a corresponding first custom farm management plan based on said input information and said third-party financial information, the objective function indicative of a corresponding economic performance of the farm, wherein the objective function is expressed as the following representation:  $\text{Max } Z \sum c_j y_j x_j - p_j x_j$ , where Max Z represents a maximization function,  $c_j$  is the price/yield unit,  $y_j$  is the yield/acre for the crop identifier j,  $x_j$  represents a crop program variable for crop identifier j, and  $p_j$  is production costs/acre for crop identifier j.

With respect to independent claims 55 and 62, none of the prior art of record, taken individually or in any combination, teach inter alia, maximizing the objective function to generate a corresponding first custom farm management plan based on said input information and said third-party financial information, the objective function indicative of a corresponding economic performance of the farm, wherein the objective function is expressed as the following representation:  $\text{Max } Z \sum [c_j y_j x_j - p_j x_j] * z_{in}$ , where Max Z represents a maximization function,  $c_j$  is the price/yield unit,  $y_j$  is the yield/acre for the crop identifier j,  $x_j$  represents a crop program variable for crop identifier j,  $p_j$  is production costs/acre for crop identifier j, and where  $z_{in}$  is a binary

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variable with a value of 0 or 1, representing the presence of absence of a planted crop  $i$  in field  $n$ .

The prior art references most closely resembling Applicant's claimed invention are Ell et al (US 2003/0036852), Remley et al (US 2002/0023052), and McCauley (USPN 6,058,351).

Ell et al disclose creating crop input requirement maps for site-specific farming, wherein the crop requirement maps contain a prescription of crop inputs for each section of a field. The user selects or inputs mathematical equations and a field attribute map containing various agronomic data is accessed by the system. The equations and field attribute maps are then combined to create a prescription of crop inputs for each section of a field. However, Ell et al does not disclose maximizing the objective function to generate a corresponding first custom farm management plan based on said input information and said third-party financial information, the objective function indicative of a corresponding economic performance of the farm, wherein the objective function is expressed as the following representation:  $\text{Max } Z \sum c_j y_j x_j - p_j x_j$ , or  $\text{Max } Z \sum [c_j y_j x_j - p_j x_j] * Z_{in}$ .

Remley et al disclose transacting exchanges of agricultural products such as crops with reduced risk to the producer, wherein the producer is provided with a guaranteed revenue adjustment that offers both yield and price protection in the event yield or market conditions fall below expectations. However, Remley et al does not disclose maximizing the objective function to generate a corresponding first custom farm management plan based on said input information and said third-party

financial information, the objective function indicative of a corresponding economic performance of the farm, wherein the objective function is expressed as the following representation:  $\text{Max } Z \sum c_j y_j x_j - p_j x_j$ , or  $\text{Max } Z \sum [c_j y_j x_j - p_j x_j] * z_{in}$ .

McCauley discloses determining management zones in a field for precision farming, including obtaining site-specific farming data, providing the data to a self-organizing network, obtaining classification outputs, and classifying locations in the field management zones based upon the site-specific data. McCauley also discloses input data referred to as a vector  $X$  at specific position  $P$ , where  $X(P)$  represents the field characteristic data at position  $P$  of the field. However, McCauley does not disclose maximizing the objective function to generate a corresponding first custom farm management plan based on said input information and said third-party financial information, the objective function indicative of a corresponding economic performance of the farm, wherein the objective function is expressed as the following representation:  $\text{Max } Z \sum c_j y_j x_j - p_j x_j$ , or  $\text{Max } Z \sum [c_j y_j x_j - p_j x_j] * z_{in}$ .

6. Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

***Conclusion***


7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Andre Boyce whose telephone number is (703) 305-1867. The examiner can normally be reached on 9:30-6pm M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tariq Hafiz can be reached on (703) 305-9643. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



adb  
February 4, 2005



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